

WHAT IS CLAIMED IS:

1. A method for providing improved online access to digital images, the method comprising:

5           creating digital images for a particular user;

          transferring copies of the digital images to a central server by:

                  transferring lower-resolution copies of the digital images to the central server using relatively-low bandwidth communication, and

                  subsequently transferring higher-resolution copies of the digital images  
10          to the central server using relatively-high bandwidth communication;

          in response to a user request for online access to the digital images from a browser, transferring said lower-resolution copies to the browser for online viewing; and

          in response to a user request for an operation that requires a high-resolution copy of a particular one of the digital images, transferring the higher-resolution copy of that  
5          particular digital image to the browser.

2. The method of claim 1, wherein said digital images are created by digitizing photographs of the user.

3. The method of claim 2, wherein said digitizing includes scanning photographic negatives.

4. The method of claim 1, wherein said digital images are created at full resolution.

5. The method of claim 1, further comprising:

          transferring said lower-resolution copies of the digital images from the central server to a Web site for supporting online display of the digital images on-demand.

6. The method of claim 5, further comprising:

transforming at least some of the lower-resolution copies of the digital images into thumbnail images at the Web site, for display in the user's browser in response a user request.

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7. The method of claim 1, wherein said lower-resolution copies of the digital images comprise photo display size images.

8. The method of claim 1, wherein said higher-resolution copies of the digital images comprise full-size images.

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9. The method of claim 1, wherein said operation that requires a high-resolution copy of a particular one of the digital images includes:  
online manipulation of the particular digital image.

10. The method of claim 9, wherein said online manipulation of the particular digital image includes cropping.

11. The method of claim 9, wherein said online manipulation of the particular digital image includes enlarging.

12. The method of claim 1, wherein said operation that requires a high-resolution copy of a particular one of the digital images includes:  
displaying the particular digital image at full resolution.

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13. The method of claim 1, wherein said step of transferring lower-resolution copies occurs via the Internet.

14. The method of claim 13, wherein said step of transferring via the Internet occurs via HTTP communication protocol.

15. The method of claim 1, wherein said digital images are created at one of a plurality of scan centers that are in communication with the central server.

16. The method of claim 1, wherein said step of transferring higher-resolution copies of the digital images includes:

creating a tape archive of the higher-resolution copies; and  
transferring information from said tape archive to the central server.

17. The method of claim 16, wherein said tape archive comprises a DLT tape archive.

18. The method of claim 16, wherein said step of transferring information from said tape archive comprises physically transporting the tape archive to the central server.

19. The method of claim 1, wherein said digital images for a particular user are created from a roll of developed film.

20. The method of claim 19, further comprising:  
assigning a claim number corresponding to the roll of developed film; and  
requiring the user to input the claim number when requesting access to the digital images.

21. The method of claim 20, wherein the digital images are grouped together in a set identified by the assigned claim number.

22. The method of claim 1, wherein said user request for online access to the digital images from a browser is first received at a Web site, and wherein said step of transferring said lower-resolution copies to the browser for online viewing includes:

transferring said lower-resolution copies from the central server to the Web site; and thereafter

transferring said lower-resolution copies from said Web site to the browser.

23. The method of claim 1, wherein said step of transferring higher-resolution copies of the digital images includes:

transferring higher-resolution copies of the digital images using a high-speed data network.

24. The method of claim 1, wherein said central server is supported by a multi-threaded operating system, and wherein said step of transferring the higher-resolution copy of that particular digital image to the browser occurs as a high-priority thread of the central server.

25. The method of claim 1, wherein said digital images are, upon creation, initially stored at a mini server that is in communication with the central server.

26. The method of claim 25, further comprising:

receiving a request at the mini server to transfer the higher-resolution copy of a particular one of the digital images to the central server; and

transferring the higher-resolution copy to the central server using the relatively-low bandwidth communication.

27. The method of claim 26, wherein said step of transferring the higher-resolution copy to the central server using the relatively-low bandwidth communication occurs as a highest-priority task for the mini server.

28. The method of claim 1, wherein said central server comprises a centralized set of one or more server computers providing on-demand retrieval of a particular set of digital images that are identified by a claim ID.

5 29. The method of claim 28, wherein said claim ID comprises a multi-digit identifier for a roll of photographic film that has been developed and scanned.

30. The method of claim 29, wherein said roll of photographic film is scanned at a scan center, and wherein said claim ID is generated at the scan center.

10 31. The method of claim 30, wherein developed roll of photographic film is labeled with said claim ID, so that the claim ID can be used for online access to the digital images that have been created.

32. The method of claim 1, wherein digital images are created at a scan center, and wherein copies of the digital images created at the scan center are deleted once other copies have been successfully transferred to the central server.

33. The method of claim 1, wherein said central server comprises multiple server computers, and wherein a locking semaphore is used to coordinate tasks among the multiple server computers.

34. The method of claim 1, wherein said digital images are created by scanning a developed roll of film to a local disk present at a scan center.

25 35. The method of claim 34, wherein said step of transferring higher-resolution copies of the digital images to the central server includes:

copying full-size high-resolution digital images onto a DLT tape present at the scan center.

36. The method of claim 35, wherein the digital images are maintained at the scan center until the full-size images copied onto the DLT tape are successfully transferred to the central server.

5 37. A system providing online access to digital images comprising:  
a plurality of scan centers for creating digital images by scanning developed  
photographic film;  
a central server serving as a central repository for digital images;  
a transport mechanism for transferring both full-resolution copies and lower-  
10 resolution copies of the digital images from said scan centers to the central server, the  
mechanism including:

a high-volume transport mechanism for transferring full-resolution  
copies of the digital images to the central server, and

a low-volume transport mechanism for transferring lower-resolution  
copies of the digital images to the central server;

wherein said low-volume transport mechanism operates to transfer said lower-  
resolution copies to the central server shortly after those copies become available; and

wherein said high-volume transport mechanism operates to transfer said  
higher-resolution copies to the central server at a point in time after the lower-resolution  
copies have already been transferred.

38. The system of claim 37, wherein said scanning includes scanning  
photographic negatives.

25 39. The system of claim 1, wherein each of said digital images is created by  
scanning a photograph at full resolution for creating a full-size digital image for the  
photograph being scanned.

40. The system of claim 1, further comprising:

a photo Web site capable of on-demand servicing of user requests to view said lower-resolution copies of the digital images.

5 41. The system of claim 40, wherein the photo Web site communicates with the central server for on-demand retrieval of said lower-resolution copies of the digital images.

10 42. The system of claim 41, further comprising:  
transforming at least some of the lower-resolution copies of the digital images into thumbnail images at the Web site, for display in a user's browser upon request.

43. The system of claim 37, wherein said lower-resolution copies of the digital images comprise photo display size images.

5 44. The system of claim 37, wherein said full-resolution copies of the digital images comprise full-size images.

10 45. The system of claim 37, further comprising:  
a browser capable of requesting online manipulation of a particular digital image, that requires a high-resolution copy of a particular one of the digital images to be transfer from the central server to the browser.

25 46. The system of claim 45, wherein said online manipulation of the particular digital image includes cropping.

47. The system of claim 45, wherein said online manipulation of the particular digital image includes enlarging.

47. The system of claim 37, wherein said low-volume transport mechanism transferring via the Internet.

48. The system of claim 47, wherein said transferring via the Internet employs HTTP communication protocol.

49. The system of claim 37, wherein said plurality of scan centers maintain Internet connectivity with the central server.

50. The system of claim 37, wherein said high-volume transport mechanism includes:

an archive device present at one or more of the scan centers for storing full-resolution copies in an archive medium; and

an archive device connected to the central server, for allowing the full-resolution copies to be transferred to the central server.

51. The system of claim 50, wherein both archive devices comprise tape archive devices.

52. The system of claim 51, wherein said archive medium comprises a DLT tape.

53. The system of claim 37, wherein a unique identifier is assigned to each roll of developed film that is scanned, for allowing the corresponding digital images to be accessed online using the unique identifier.